Application No. 10/041,750   Atty. Docket No. 4860P2739
Amendment dated August 9, 2005   Examiner An, Shawn S.
Response to Office Action of June 10, 2005   TC/A.U. 2613

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Original) A method comprising:

performing an encoding transformation on a set of data representing a video frame as frame-based data and as field-based data to generate arrays of frame-based data and arrays of field-based data;

selecting either the arrays of frame-based data or field-based data based, at least in part, on the number of non-zero coefficients in the frame-based data and the field-based data; and

converting an ordering of the arrays of selected data.

2.   (Original) The method of claim 1 wherein the encoding transformation is a discrete cosine transform (DCT) operation.

3.   (Original) The method of claim 2 wherein the encoding transformation further comprises quantization of results of the DCT operation.

4.   (Original) The method of claim 1 wherein selecting either the arrays of frame-based data or field-based data based, at least in part, on the number of non-zero coefficients in the frame-based data and the field-based data comprises:

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comparing a macroblock of frame-based data to a macroblock of field-based data;

and

selecting the macroblock of data having the fewer number of non-zero

coefficients.

5.   (Original) The method of claim 1 wherein converting an ordering of the

arrays of frame-based data coefficients and of the arrays of field-based data coefficients

comprises performing a zig-zag conversion wherein an 8x8 matrix having an original

order of:

0	1	2	3	4	5	6	7
8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55
56	57	58	59	60	61	62	63

are converted to having a scanning order of:

0	1	5	6	14	15	27	28
2	4	7	13	16	26	29	42
3	8	12	17	25	30	41	43
9	11	18	24	31	40	44	53
10	19	23	32	39	45	52	54
20	22	33	38	46	51	55	60
21	34	37	47	50	56	59	61
35	36	48	49	57	58	62	63

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6.   (Original) An article of manufacture comprising electronically-accessible

medium to provide instructions that, when executed, by one or more processors, cause

one or more electronic systems to:

perform an encoding transformation on a set of data representing a video frame as

frame-based data and as field-based data to generate arrays of frame-based data and

arrays of field-based data;

select either the arrays of frame-based data or field-based data based, at least in

part, on the number of non-zero coefficients in the frame-based data and the field-based

data; and

convert an ordering of the arrays of selected data.

7.   (Original) The article of claim 6 wherein the instructions that cause the

one or more electronic systems to perform encoding transformation comprise instructions

that, when executed, cause the one or more electronic systems to perform a discrete

cosine transform (DCT) operation on the data representing the video frame.

8.   (Original) The article of claim 7 wherein the instructions that cause the

one or more electronic systems to perform encoding transformation further comprises

instructions that, when executed, cause the one or more electronic systems to perform

quantization of results of the DCT operation.

9.   (Original) The article of claim 6 wherein the instructions that cause the

one or more electronic systems to select either the arrays of frame-based data or field-

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based data based, at least in part, on the number of non-zero coefficients in the frame-based data and the field-based data comprises instructions that, when executed, cause the one or more electronic systems to:

compare a macroblock of frame-based data to a macroblock of field-based data;

and

select the macroblock of data having the fewer number of non-zero coefficients.

10.   (Original) The article of claim 6 wherein the instructions that cause the one or more electronic systems to convert an ordering of the arrays of frame-based data coefficients and of the arrays of field-based data coefficients comprises instructions that, when executed, cause the one or more electronic systems to perform a zig-zag conversion wherein an 8x8 matrix having an original order of:

0	1	2	3	4	5	6	7
8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55
56	57	58	59	60	61	62	63

are converted to having a scanning order of:

0	1	5	6	14	15	27	28
2	4	7	13	16	26	29	42
3	8	12	17	25	30	41	43
9	11	18	24	31	40	44	53
10	19	23	32	39	45	52	54
20	22	33	38	46	51	55	60
21	34	37	47	50	56	59	61
35	36	48	49	57	58	62	63

11.   (Original) An apparatus comprising:

means for performing an encoding transformation on a set of data representing a video frame as frame-based data and as field-based data to generate arrays of frame-based data and arrays of field-based data;

means for selecting either the arrays of frame-based data or field-based data based, at least in part, on the number of non-zero coefficients in the frame-based data and the field-based data; and

means for converting an ordering of the arrays of selected data.

12.   (Original) The apparatus of claim 11 wherein the means for encoding transformation performs a discrete cosine transform (DCT) operation.

13.   (Original) The apparatus of claim 12 wherein the means for encoding transformation further comprises means for quantization of results of the DCT operation.

14.   (Original) The apparatus of claim 11 wherein the means for selecting

either the arrays of frame-based data or field-based data based, at least in part, on the

number of non-zero coefficients in the frame-based data and the field-based data

comprises:

        means for comparing a macroblock of frame-based data to a macroblock of field-

based data; and

        means for selecting the macroblock of data having the fewer number of non-zero

coefficients.

15.   (Original) The apparatus of claim 11 wherein the means for converting an

ordering of the arrays of frame-based data coefficients and of the arrays of field-based

data coefficients comprises means for performing a zig-zag conversion wherein an 8x8

matrix having an original order of:

0	1	2	3	4	5	6	7
8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31
32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47
48	49	50	51	52	53	54	55
56	57	58	59	60	61	62	63

are converted to having a scanning order of:

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0	1	5	6	14	15	27	28
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10	19	23	32	39	45	52	54
20	22	33	38	46	51	55	60
21	34	37	47	50	56	59	61
35	36	48	49	57	58	62	63